UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB1998-0945

February 10, 1998

Roberta Moltzen, Forest Supervisor
Mt. Hood National Forest
16400 Champion Way
Sandy, Oregon 97055-7299

RE: Endangered Species Act Section 7 Conference Opinion on Pardner, Cowpoke, and Bonanza Timber Sales

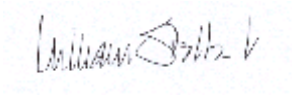
Dear Ms. Moltzen:

Enclosed is the conference opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act on the Pardner, Cowpoke, and Bonanza Timber Sales which will occur on the Mt. Hood National Forest.

The NMFS has determined that the implementation of Pardner, Cowpoke, and Bonanza Timber Sales is not likely to jeopardize the continued existence of proposed as threatened Lower Columbia River steelhead. This determination was based on a number of conclusions and assumptions stated in the Opinion. In summary, there will be short-term effects (slight increase in Aggregate Recovery Percentage values and possible sediment loads, but these have been minimized); however there will be long-term benefits e.g. accelerated growth of riparian reserve areas.

Questions regarding this letter should be directed to Michelle Day of my staff at (503) 231-6938.

Sincerely,



William Stelle, Jr.
Regional Administrator

Enclosures

cc: Joe Moreau, Mt. Hood National Forest

Endangered Species Act - Section 7
Consultation

CONFERENCE OPINION

Pardner, Cowpoke, and Bonanza Timber Sales

Agency: USDA Forest Service, Mt. Hood National Forest, Clackamas Ranger District

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: February 10, 1998

Refer to: OSB1998-0945

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I. Background

On April 25, 1997, streamlining consultation level 1 team members Joe Moreau, Mt. Hood National Forest, and Michelle Day, National Marine Fisheries Service met to review the Pardner, Cowpoke, and Bonanza timber sales. The level 1 members concurred on the effects determination in May 1997. On January 28 and 29 of 1998, the Forest Service provided summary information.

The specific Evolutionarily Significant Unit (ESU)[1] covered in this Conference Opinion is the Lower Columbia River (LCR) steelhead (*Oncorhynchus mykiss irideus*) which is proposed as threatened. The objective of this conference opinion is to determine whether the Pardner, Cowpoke, and Bonanza timber sales are likely to jeopardize the continued existence of the Lower Columbia River Steelhead. While the Conference evaluates effects of the proposed actions on this species habitat, critical habitat has not been proposed or designated, and therefore conclusions regarding destruction or adverse modification of critical habitat are not included in this Conference.

Pursuant to the ESA implementing regulations, 50 CFR Part 402 (§ 402.10(d)), this conference has been conducted in accordance with the procedures for formal consultation. Provided that no significant new information is developed and no significant changes to this proposed action are made (see section VIII of this document), this conference may be adopted as the biological opinion should the lower Columbia River steelhead be listed. An incidental take statement is provided with this conference opinion, but does not become effective unless NMFS adopts this opinion as the biological opinion in the event listing becomes final.

II. Proposed Action

Pardner and Cowpoke Timber Sales

The Pardner Timber Sale (TS) and Cowpoke TS are the result of the Buckaroo Environmental Assessment. The decision notice was signed on August 31, 1992. These sales were sold once, then returned to the Forest Service because haul routes had been damaged by the large floods of the winter of 95/96. After modifications for environmental and economic reasons, these sales are proposed to be resold. Some of the units in the Pardner TS were logged prior to the sale being returned to the Forest Service. Remaining units in the Pardner TS are: 5, 7, 8, 9, 10, 14, 15, 34, 77 and 80. Units 5, 8, and 9 are in a separate watershed and are evaluated in a separate conference report. Cowpoke TS is being resold in its entirety: Units 2, 3, 35, 103, 122, 123, 135, 235, and 402.

The Pardner TS has 300 feet of spur road remaining to be constructed into Unit 80. There is no road construction for the Cowpoke TS. The entirety of the Cowpoke TS and those units described above

[1]For the purposes of conservation under the Endangered Species Act, an Evolutionarily Significant Unit (ESU) is a distinct population segment that is substantially reproductively isolated from other conspecific population units and represents an important component in the evolutionary legacy of the species (Waples 1991).

for Pardner TS are located within the Oak Grove Fork of the Clackamas River. These sales are within the Evolutionarily Significant Unit for the LCR steelhead. The LCR steelhead are known to utilize the lower reaches of the Oak Grove Fork to a natural falls barrier at river mile (RM) 3.75.

The sales thin second growth stands within existing plantations, and second growth stands that are the result of fires. The intent is to increase growth and reduce mortality associated with overcrowded conditions, as well as reduce risk of insect and disease problems, and increase forage for wildlife. The thinning typically opens the stands to 40% canopy closure.

Some of the units in the Pardner TS involve thinning trees within Riparian Reserves (see table below). The Oak Grove Fork Watershed Analysis identifies that the watershed is outside the range of natural variability for early seral stage habitat and that there is an opportunity for thinning within early seral stage stands from plantations with Riparian Reserves. This would accelerate growth to provide future large woody debris sources. None of the Cowpoke TS units enter Riparian Reserves. Thinning within Riparian Reserve areas will be lighter, to 60% canopy closure. No-thin buffers adjacent to streams are approximately 33 feet wide. A summary of the activities is presented below.

1. Three hundred feet of temporary road construction.
2. Thin stands to approximately 40% canopy closure, or 60% canopy closure within Riparian Reserves. All units will be individual tree mark or leave tree mark.

Sale/units	Units (acres) with Riparian Thinning	Total Acres	Yarding	Volume (mmbf)
Pardner/7	5 (85)	237	skyline (6) tractor (1)	2.9
Cowpoke/9	0	101	skyline (3*) tractor (9*)	1.1

*Note that three units of Cowpoke are subdivided. They will each have tractor yarding and skyline yarding.
3. Fuels treatment involving cool underburns in units 7 and 80.
4. Using a winged subsoiler to scarify landings, temporary roads, major skid trails and roads closed with earth berms.
5. General erosion control on exposed soil areas with an erosion control/wildlife forage seed mix. If needed areas would be fertilized and mulched.
6. Plant riparian species and/or seed with erosion control mix in some riparian areas.
7. Obliterate approximately 2.5 miles of existing temporary road and close or obliterate the approximately 1 mile of new temporary road created by the sales after the sales are closed.
8. Enhance mine tunnels for big-eared bats. This is the installation of culverts to prevent slumping from closing openings and install gates.
9. Girdle trees and fell additional trees within units to enhance wildlife habitat.
10. Place logs in Butte Creek to improve cutthroat trout habitat.
11. Place logs in Station Creek adjacent to unit 3 to increase pool habitat.
12. In John Creek, from RM 0.4 to 1.4, plant conifers in the riparian area and add logs. Develop a jump pool at the culvert under FS road 5700-130 to improve fish passage.
13. Enhance forage in some of the openings by seeding and/or shrub planting.
14. Plant alder in some riparian areas and openings.
15. Place mineral blocks and protein supplements for elk.
16. Aerial fertilization within units to enhance growth.

Bonanza Timber Sale

The Bonanza TS is the result of the Bonanza Environmental Assessment. The decision notice selecting Alternative C was signed on May 24, 1993. This sale was sold once, then returned to the Forest Service because haul routes had been damaged by the large floods of the winter of 95/96. After modifications for environmental reasons, the sale is proposed to be resold.

The Bonanza TS has 350 feet of spur road construction to access landings. The sale is within the East Fork Collawash River and mainstem Collawash River subwatersheds. They are located within the Clackamas River watershed. The sales are within the Evolutionarily Significant Unit for the LCR steelhead. The LCR steelhead are known to utilize the Collawash River and several tributaries.

The sales thin second growth stands within existing plantations, and second growth stands that are the result of fires. Thinning varies, with the majority of units being thinned to 50% canopy closure and other units being thinned from 40 to 70% canopy closure. The intent is to increase growth and reduce mortality associated with overcrowded conditions, as well as reduce risk of insect and disease problems, and increase forage for wildlife.

Some of the units in the Bonanza TS thin trees within Riparian Reserves. This is consistent with a recommendation in the Collawash/Hot Springs Watershed Analysis (Mt. Hood National Forest 1995) to promote late seral forest structure in currently early seral stage plantations, both within and outside Riparian Reserves. This would accelerate growth to provide future large woody debris sources and provide other ecological benefits. No-thin buffers adjacent to streams vary in length depending upon where the break in slope to the inner gorge is located. A summary of the activities is presented below.

1. Three hundred fifty feet of temporary road construction.

2. Thin second growth stands with an individual tree mark or leave tree mark designation.

Number of units	Acres	Yarding (# units)	Volume (mmbf
40	718	skyline (30)*	6.7
		helicopter (8)*	
		high lead (3)*	
		horse w/tractor wing (2)*	

* Note that this adds up to greater than 40 units. That is because several units are divided into parts with different logging systems.

3. Fuels treatment involves burning slash concentrations, grapple piling, lop and scatter, and burning landing slash.

4. Use a soil cultivator to restore soil infiltration where more than 15% (8% on earthflows) is in an impaired condition within the activity area. Tilled areas would be seeded with an erosion control/wildlife forage seed mix.

5. General erosion control on exposed soil areas with an erosion control/wildlife forage seed mix. If needed areas would be fertilized and mulched.

6. Plant riparian species in riparian areas disturbed by logging activities.

7. Obliterate approximately 0.6 mile of existing temporary road and close or

obliterate the 350 feet of temporary road developed for this project. Close by guard rail or gate additional pre-existing roads.
8. Girdle trees and fell additional trees within units to enhance wildlife habitat.
9. Plant alder in some riparian areas and openings.
10. Place mineral blocks and protein supplements for elk.
11. Aerial fertilization and pruning in plantations.

III. Biological Information and Critical Habitat

The listing status and biological information for LCR steelhead are described in Attachment 1. Critical habitat has not yet been designated or proposed for this species.

IV. Evaluating Proposed Actions

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by its implementing regulations (50 CFR § Part 402). NMFS discusses the analysis necessary for application of these standards in the particular contexts of the Pacific salmonids in Attachment 2. This analysis involves the following steps: (A) define the biological requirements of the species; (B) evaluate the environmental baseline relative to the species' current status; (C) determine the effects of the proposed or continuing action on the species; (D) determine whether the species can be expected to survive with an adequate potential for recovery under the effects of the proposed or continuing action, the environmental baseline and any cumulative effects, and considering measures for survival and recovery specific to other life stages; and (E) identify reasonable and prudent alternatives to a proposed or continuing action that is likely to jeopardize the continued existence of the species.

A. Biological Requirements

The first step in the method the NMFS uses in applying the ESA standards of Section 7(a)(2) to Pacific salmonids is to define the species' biological requirements that are most relevant to each consultation. The NMFS finds that these biological requirements are best expressed in terms of environmental factors that define properly functioning freshwater aquatic habitat necessary for the survival and recovery of LCR steelhead. Individual environmental factors include water quality, habitat access, physical habitat elements, river channel condition, and hydrology.
These are measurable variables, with properly functioning values determined by the best available information as those necessary for sufficient prespawning survival and distribution, spawning success, egg-to-smolt survival, smolt emigration survival and timing, and smolt condition to allow the long-term survival of the species. Properly functioning watersheds, where all of the individual factors operate together to provide healthy aquatic ecosystems, are necessary for the survival and recovery of these species. This information is discussed further in Attachment 1.

B. Environmental Baseline

The environmental baseline is an analysis of the effects of past and ongoing human and natural factors leading to the current status of the species or its habitat and ecosystem (NMFS and USFWS 1996). The environmental baseline for the action area covered by this Conference includes the Oak Grove Fork, the East Fork Collawash River, and the mainstem Collawash River which are all located within the Clackamas River watershed.

The general environmental baseline affecting Pacific salmonids has been described in various documents. The report of the Forest Ecosystem Management Assessment Team (FEMAT 1993) provides a regional assessment of aquatic ecosystems within the range of the northern spotted owl (including the range of LCR steelhead), particularly with regard to land management actions. Chapter V of FEMAT (1993) focuses on current aquatic habitat conditions and the effects of degraded habitat on fish populations. Page V-2 notes that "[a]quatic ecosystems in the range of the northern spotted owl exhibit signs of degradation and ecological stress." Many factors such as dams, overharvest, excessive predation, disease, artificial propagation, poor ocean conditions, and the destruction and alteration of habitat have been implicated in the decline of Pacific salmonids. Aquatic habitat degradation has resulted from a wide range of land- and water-use practices including timber harvest, road construction, mining, grazing, agriculture, construction and operation of dams, irrigation, and flood control (Busby *et al.* 1996; Spence *et al.* 1996). These activities (with the exception of agriculture) occur on National Forest lands within the LCR steelhead ESU.

In general, these activities have: (1) reduced connectivity between streams, riparian areas, floodplains, and uplands; (2) significantly increased sediment yields, leading to pool filling and reduction in spawning and rearing habitat; (3) reduced or eliminated instream replenishment of large woody debris which serves to trap sediment, stabilize stream banks, form pools, and provide cover; (4) reduced or eliminated vegetative canopy that minimizes stream temperature fluctuations; (5) reduce stream complexity by causing streams to become straighter, wider, and shallower which reduces spawning and rearing habitat and increases temperature fluctuations;
(6) alter peak flow volume and timing; (7) alter water tables and base flow; and (8) contribute to degraded water quality by adding toxicants through mining and pest control (FEMAT 1993; Rhodes *et al.* 1994; Spence *et al.* 1996).

The Clackamas River drains into the Willamette River below Willamette Falls near Oregon City, Oregon. Three hydroelectric projects are operated on the lower portion of the mainstem downstream of the National Forest boundary. About 70 percent of the watershed is managed by the Mt. Hood National Forest and 2 percent by the Salem District BLM. Approximately 26 percent of the watershed is under private ownership. The remaining 2 percent is owned by the Confederated Tribes of the Warm Springs Indian Reservation with a very small portion (<0.1 percent) managed by the state of Oregon (ODFW 1992). ****The Clackamas River and major tributaries, beginning at the Forest boundary upstream to its headwaters, are designated key tier 1 watersheds. Tributary streams under key tier 1 designation are Fish Creek, Roaring River, the Oak Grove Fork Clackamas River, and the

Collawash River.**** ODFW (1992) reports that clear cutting, removal of large woody debris from stream channels, removal of streamside vegetation, and road building have created the greatest impacts in the upper portion of the watershed. The average Forest road density for the Clackamas River watershed is 2.8 miles per square mile (USDA-FS 1995a; 1995b). Fish Creek and the Collawash River, tributaries to the upper Clackamas River, are considered stronghold areas for LCR steelhead. Fish Creek produces roughly 20 percent of LCR steelhead smolts in the Clackamas watershed (Joe Moreau, USFS, per. comm.).

In summary, the principle ways in which land management policies have contributed to the decline of salmon habitat include: (1) overemphasis on production of non-fishery commodities resulting in losses of riparian and fish habitat; (2) failure to take a biologically conservative or risk-averse approach to planning land management actions when inadequate information exists about the relationship between land management actions and fish habitat; (3) planning land management activities on a site-specific basis rather than on a broader, watershed scale; and (4) reductions in the number, size, and distribution of remaining high-quality habitat areas (such as roadless and minimally developed areas) that serve as biological refugia for anadromous fish subpopulations (FEMAT 1993; Rhodes *et al*. 1994).

V. Analysis of Effects

A. Effects of Proposed Action

The effects of the proposed three timber sales were evaluated using the "Matrix of Pathways and Indicators" (NMFS 1996). For rationale and summary of the evaluations, refer to Attachment 3.

Pardner and Cowpoke TSs

There is the potential for short-term "harassment" of steelhead trout by the proposed fish habitat improvement projects. There is likely to be short-term turbidity generated during the placement of logs in the stream. This may enter into the mainstem of Oak Grove Fork where steelhead trout juveniles rear during the summer months and result in them moving away from their rearing site temporarily. The thinning activities also enter riparian reserves on earthflows. Current Aggregate Recovery Percentage (ARP)[2] values exceed the threshold for a certain category of earthflow. These will be slightly reduced (further exceeding the threshold). This indicates a slightly increased risk of cumulative effects until the thinned stands increase canopy closure. The thinning within the riparian reserves is intended to accelerate growth of the stands, and will improve riparian reserve conditions and processes (such as providing sources of large wood debris to stream channels) in the long-term.

Bonanza TS

[2] An approach the Mt. Hood National Forest developed to calculate hydrologic recovery to be used to as a way to assess the impacts to stream channels on the Western Cascades fron upslope management activities.

A large proportion of the thinning activities will occur on earthflow terrain and some of the units enter riparian reserves. The analysis in the environmental assessment indicates that current ARP values exceed the threshold for certain categories of earthflow. These will be slightly reduced (further exceeding the threshold). This indicates a slightly increased risk of cumulative effects until the thinned stands increase canopy closure. The thinning within the riparian reserves is intended to accelerate growth of the stands, and will improve riparian reserve conditions and processes (such as providing sources of large wood debris to stream channels) in the long-term.
Mitigation measures are expected to minimize the potential for sediments to enter stream channels.

B. Cumulative Effects

Cumulative effects are defined as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation" (50 CFR § 402.02). For the purposes of this consultation, the action area includes the Oak Grove Fork, the East Fork Collawash River, and the mainstem Collawash River which are all located within the Clackamas River and river reaches downstream of the Forest Service lands that may be affected by the proposed activities.

Within the LCR steelhead ESU, Federal lands comprise approximately 47 percent of the area.
A substantial portion of spawning and rearing habitat for LCR steelhead occurs on USFS and BLM lands. Gradual improvements in habitat conditions for salmonids are expected on these lands as a result of management plan implementation.

The dominant land-use activities on non-Federal lands within the watersheds considered in this Conference are forestry and agriculture. A small, but increasing, proportion of this non-Federal land is being used for urban growth. Historically, agriculture, livestock grazing, forestry and other activities on non-Federal land have contributed substantially to temperature and sediment problems in the ESU. Conditions on and activities within non-Federal riparian areas along stream reaches downstream of the USFS and BLM land presently exert a greater influence on river temperatures and probably contribute more sediment to the habitat of LCR steelhead than the USFS and BLM land.

Significant improvements in LCR steelhead production outside of USFS and BLM land is unlikely without changes in forestry, agricultural, and other practices occurring within non-Federal riparian areas. NMFS is aware that significant efforts, such as Oregon's Coastal Salmon Restoration Initiative and Washington's Wild Salmonid Policy, have been developed to improve conservation of at-risk salmonid populations (including LCR steelhead) on non-Federal land. NMFS is not aware of any general changes to existing State and private activities within the action area that would cause greater impacts than presently occur to any of the salmonid species considered in this Conference.

Until improvements in non-Federal land management practices are actually implemented, the NMFS assumes that future private and State actions will continue at similar intensities as in recent years. Should the LCR steelhead ESU be listed under the ESA, the NMFS assumes that non-Federal land

owners in those areas will also take steps to curtail or avoid land management practices that would result in the take of those species. Such actions may be prohibited by section 9 of the ESA, and subject to the incidental take permitting process under section 10 of the ESA. Future Federal actions, including the ongoing operation of hydropower projects, hatcheries, fisheries, and land management activities will be reviewed through separate section 7 processes. In addition, non-Federal actions that require authorization under section 10 of the ESA would be considered in the environmental baseline for future section 7 consultations.

VI. Conclusion

NMFS has determined that, based on the information and analysis described in this Conference and attachments, that implementation of the Cowpoke, Pardner, and Bonanza timber sales is not likely to jeopardize the continued existence of Lower Columbia River.

Basis for Determinations

There will be short-term effects (slight increase in ARP values and possible sediment loads, but these have been minimized); however there will be long-term benefits e.g. accelerated growth of riparian reserve areas.

VII. Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information.

The NMFS believes the following conservation recommendations are consistent with these obligations, and therefore should be implemented by the Mt. Hood National Forest. The NMFS also recommends these measures because they are expected to further streamline future section 7 consultations for proposed actions:

1. To facilitate ESA consultation and to minimize site and combined watershed-scale effects of future timber harvest, the Mt. Hood National Forest should coordinate long-term timber harvest planning on river basin and watershed scales. The results of watershed analyses, river basin or provincial assessments (such as the Umpqua River Basin Assessment being conducted by the Southwest Oregon PIEC), and other relevant information should be utilized when planning timber harvest to assure that ACS objectives are fully attained.

2. To maintain current knowledge of important fish production areas and the overall success of habitat protection and restoration efforts, the Mt. Hood National Forest should continue to

conduct stream surveys and monitor fish populations on lands they administer. These efforts are in addition to contributing as necessary to regional implementation and effectiveness monitoring efforts.

VIII. Reinitiation of Consultation

Reinitiation of this conference is required if: (1) new information reveals that effects of the proposed action may affect listed species in a way not previously considered; (2) the action is modified in a way that causes an effect on listed species that was not previously considered; or (3) a new species is listed or critical habitat is designated that may be affected by the action
(50 CFR § 402.16).

IX. References

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the sources of data, information and references used in developing this Conference in addition to that submitted by the Forest Service.

Busby, P.J., T.C. Wainwright, G.J. Bryant, L. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-NWFSC-27, 261p.

Forest Ecosystem Management Assessment Team (FEMAT). 1993. Forest ecosystem management: an ecological, economic, and social assessment report of the Forest Ecosystem Management Assessment Team (FEMAT). Forest Service, National Marine Fisheries Service, Bureau of Land Management, Fish and Wildlife Service, National Park Service, and Environmental Protection Agency. July.

National Marine Fisheries Service (NMFS). 1996. Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale. NMFS, Environmental and Technical Services Division, Habitat Conservation Branch, 525 NE Oregon Street, Portland, Oregon. August. 28 pages.

National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS). 1996. Draft Section 7 Endangered Species Consultation Handbook -- Procedures for Conducting Section 7 Consultations and Conferences. June.

Oregon Department of Fish and Wildlife (ODFW). 1992. Clackamas River Subbasin Fish Management Plan. ODFW, Portland, Oregon. 174p.

Rhodes, J.J., D.A. McCullough, and F.A. Espinosa, Jr. 1994. A coarse screening process for potential application in ESA consultations. Columbia River Intertribal Fish Commission. Prepared under NMFS/BIA Inter-Agency Agreement 40ABNF3. December.

Spence, B.C., G.A. Lomnicky, R.M. Hughes, and R.P. Novitzki. 1996. An ecosystem approach to salmonid conservation. TR-4501-96-6057. ManTech Environmental Research Services Corp., Corvallis, OR.

USDA-FS. 1995a. Watershed analysis, upper Clackamas watershed. Mt. Hood National Forest, Sandy, Oregon.

USDA-FS. 1995b. Collawash/Hot Srings watershed analysis. Final Report. Mt. Hood National Forest, Sandy, Oregon.

Waples, R. 1991. Definition of a "species" under the Endangered Species Act: application to Pacific salmon. NOAA Tech. Memo. NMFS F/NWC-194. National Marine Fisheries Service, 525 NE Oregon St./Suite 500, Portland, Oregon. 29 p.

X. Incidental Take Statement

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patters such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

The measures described below are non-discretionary. They must be implemented by the action agency so that they become binding conditions necessary in order for the exemption in section 7(o)(2) to apply. The administrative unit has a continuing duty to regulate the activity covered in this incidental take statement. If the administrative unit (1) fails to adhere to the terms and conditions of the incidental take

statement, and/or (2) fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Should LCR steelhead be listed under the ESA, the NMFS expects that this Opinion will be the basis of a biological opinion for those ESUs. Further, the following Incidental Take Statement is expected to become effective following the NMFS' adoption of this Opinion as the biological opinion once a LCR listing becomes final (50 CFR Section 402.10(d)).

A. Amount or Extent of the Take

Notwithstanding the NMFS' conclusion that continued implementation of management direction in the subject management plans is not expected to jeopardize the continued existence of LCR steelhead, agency decision makers retain enough discretion when implementing management direction in the management plans that the NMFS anticipates more than a negligible likelihood of incidental take of these species from such actions.

B. Reasonable and Prudent Measures

NMFS believes that the incidental take of Lower Columbia River Steelhead that is likely to occur as a result of the actions included in this Conference Opinion has been adequately minimized by project design and mitigation. Therefore reasonable and prudent measures to further reduce this incidental take are not necessary.